

MINUTES AND HOURS... NOT DAYS AND WEEKS: THE US ARMY FIGHTS A LOW INTENSITY CONFLICT IN THE TECHNOLOGY AGE

2002

In 2002, the US Army was engaged in combat operations in Afghanistan as part of Operation Enduring Freedom (OEF). The Army's acquisition system, designed to respond in a deliberate fashion to well-documented and fully justified requirements, struggled to adjust. The immediate challenges of current combat operations removed the luxury of time from the equation. The Army had to find a way to quickly address the urgent combat requirements of Soldiers and their field commanders. In response, the Rapid Equipping Force (REF) was formed as a part of the Department of the Army.



JUNE

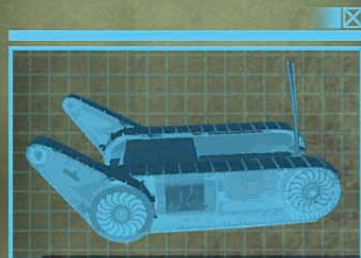
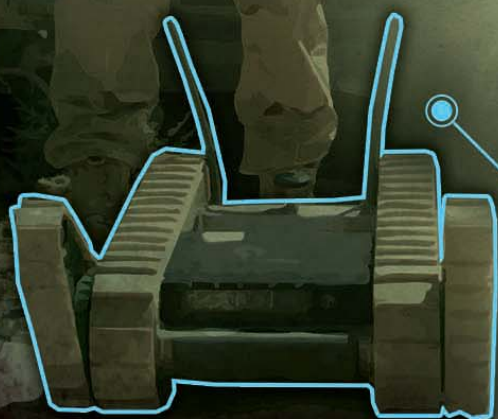
Vice Chief of Staff Army, GEN John (Jack) Keane meets with COL Bruce Jette to discuss technology to support OEF.

NOVEMBER

Rapid Equipping Force (REF) initiative approved as a part of the Department of the Army, reporting directly to the Vice Chief of Staff of the Army.

First Director of the REF appointed.

A team from the REF deploys to Afghanistan in support of OEF. They successfully deploy robots to explore and clear tunnel complexes.



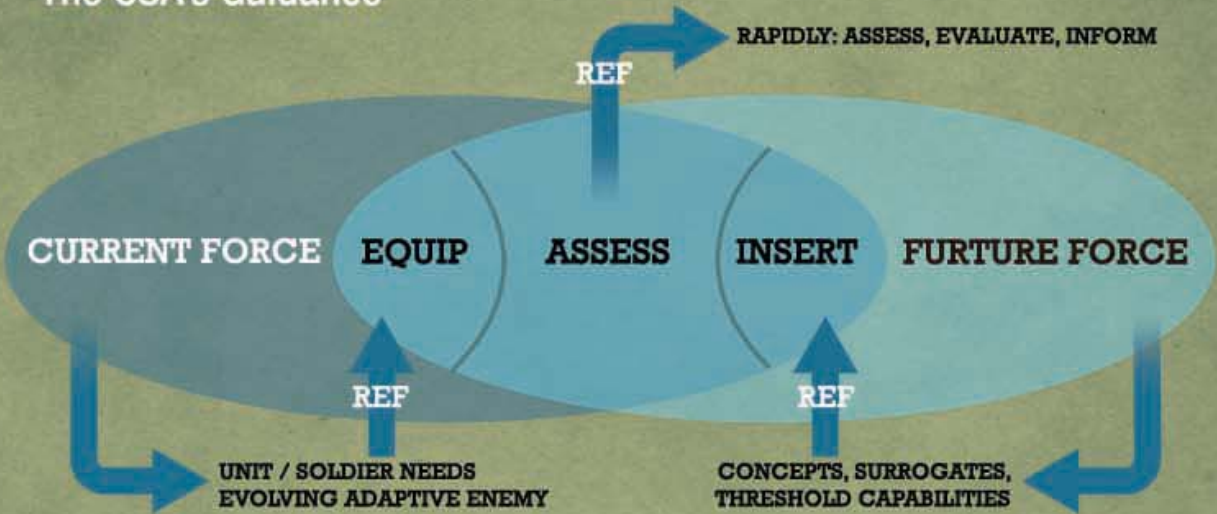
PackBot System, Afghanistan

THE REF FOCUSES ITS SUPPORT TO OPERATION IRAQI FREEDOM (OIF)

2003

Even prior to the initiation of OIF, the REF was directed to provide selected equipment to units assembling in Kuwait. When the invasion of Iraq was launched, the REF continued to provide support from its location in Kuwait. Eventually, there were permanent forward teams at Logistics Support Area (LSA) Anaconda in Balad and at Combat Operating Base (COB) Speicher in Tikrit. During this period, the REF also provided manpower to support daily operations in Ramadi and Mosul.

The CSA's Guidance



Army Chief of Staff Guidance

JANUARY

The Army Strategic Planning Board (ASPB) becomes the initial funding mechanism for the REF. It later becomes the present-day Army Requirements and Resourcing Board (AR2B). The REF gained approval and funding from the ASPB for five projects totaling \$12.8 million.

MARCH

Operation Iraqi Freedom (OIF) begins.

APRIL

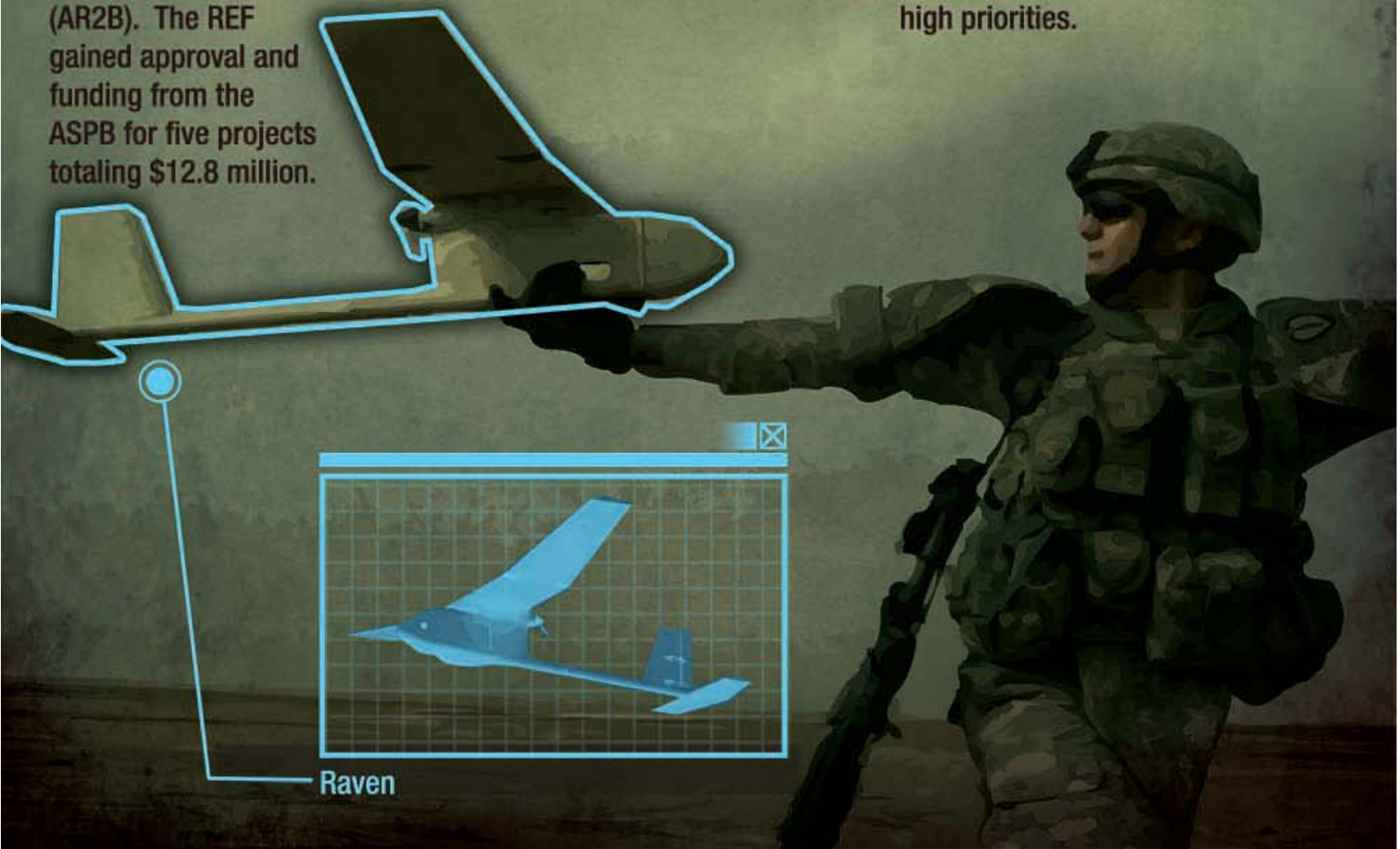
REF formally stands-up in a temporary trailer on the grounds of the Army's Night Vision Laboratory Compound on Ft. Belvoir, VA with 12 personnel.

AUGUST

Chief of Staff, Army, endorses the mission and function of the REF and then expands upon it. His guidance was to continue the current effort to equip the current force with solutions for emerging high priorities.

OCTOBER

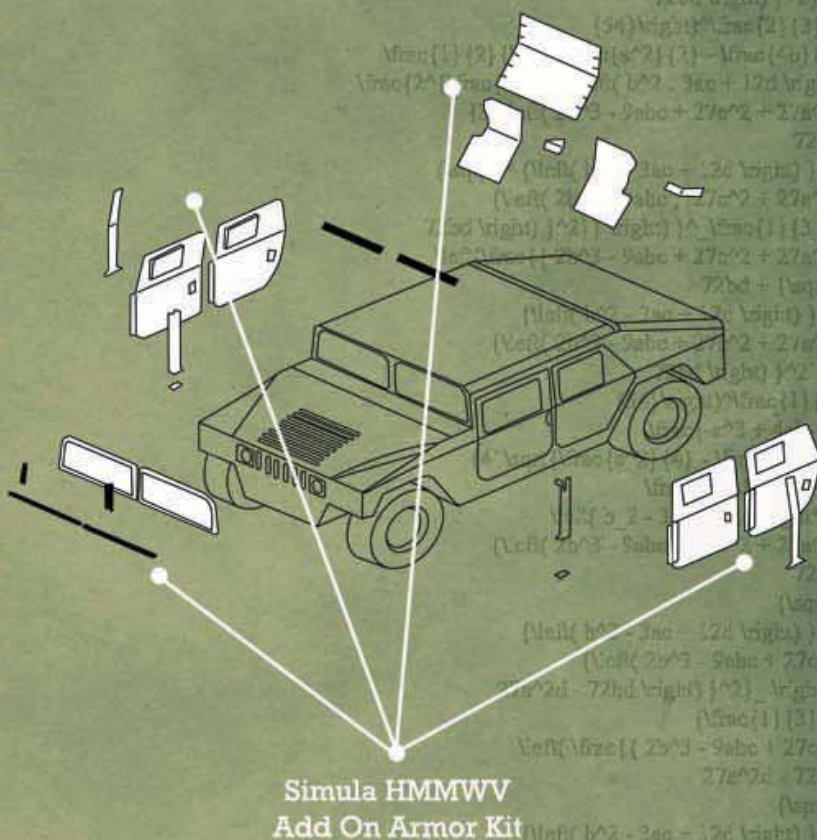
REF begins partnership with the Army Improvised Explosive Device (IED) Task Force.



THE REF RESPONDS TO COUNTER THE ESCALATING THREAT FROM IMPROVISED EXPLOSIVE DEVICES

2004

In July 2004, the Deputy Secretary of Defense directed the establishment of the Joint Improvised Explosive Device Task Force (JIEDTF), essentially a re-titled Army IED Task Force. While day to day operations changed very little, new agreements were required to formalize the acquisition and logistics support that the REF provided to the JIEDTF. Through an agreement between the REF and the JIEDTF, the REF provided personnel support for acquisition, training, scientists, intelligence analysts, and program analysts.



JANUARY

First ballistic armor kit for vehicle sent to OIF.

MARCH

REF begins full-time manning by government and military in 179 day temporary assignments.

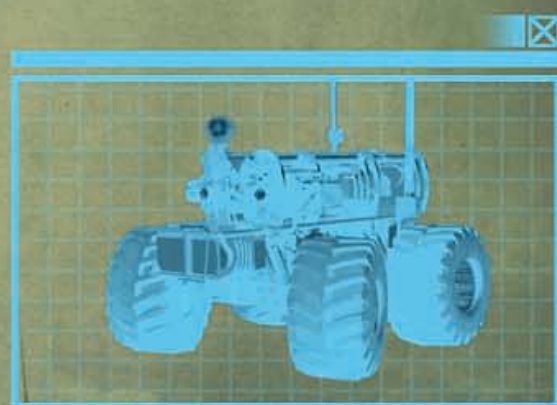
REF Project Manager established by Assistant Secretary of the Army (Acquisition, Technology and Logistics).

JULY

Joint Improvised Explosive Device Task Force (JIEDTF) established.



SELF SCREENING VEHICLE
JAMMER (SSVJ)



Marchbot System

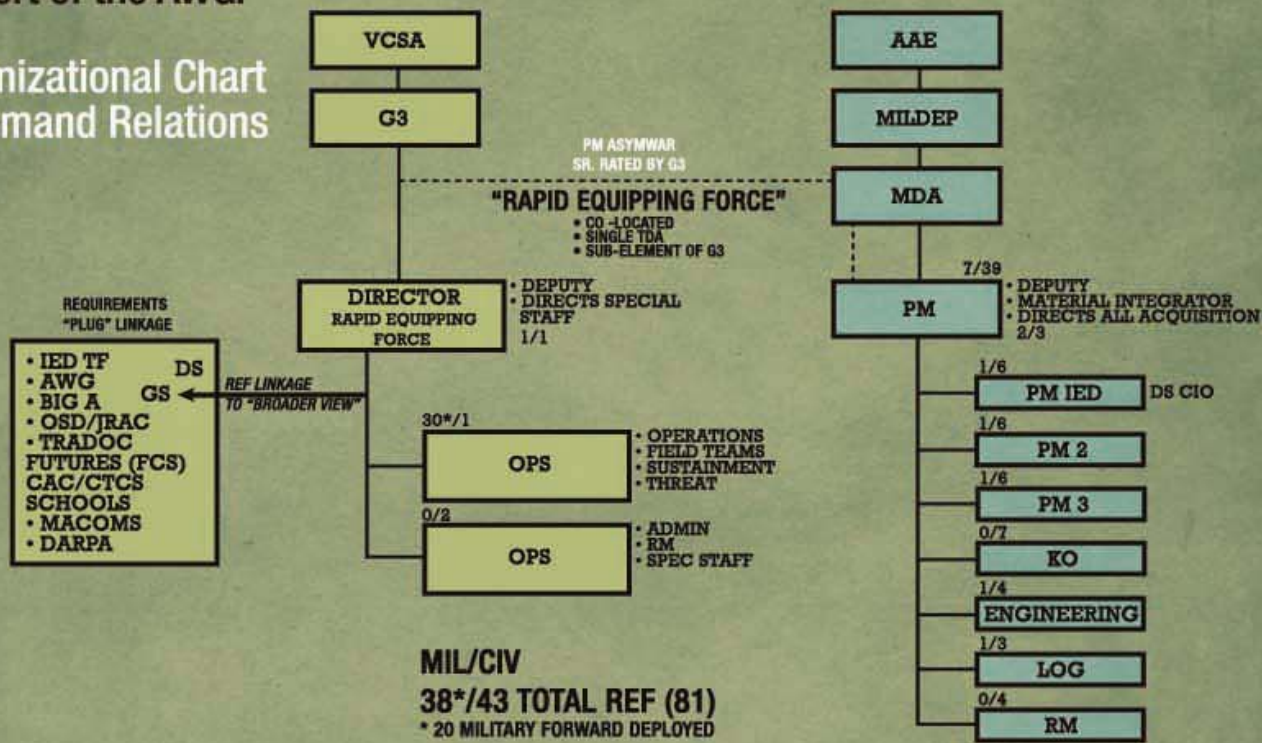


THE REF EXPANDS ITS ROLE IN ASYMMETRIC WARFARE

2005

At the direction of the Vice Chief of Staff, the Army formed a new type of organization that could support both Joint and Army Force Commanders to mitigate and defeat specified asymmetric threats. The Asymmetric Warfare Group (AWG) achieved an Initial Operating Capability (IOC) in January, 2005 as a Field Operating Agency, reporting to the HQDA G-3/5/7, and was designed and organized to close asymmetric warfare capability gaps that existed primarily in the conventional forces of the US Army. The REF was placed in direct support of the AWG.

REF Organizational Chart with Command Relations



JANUARY

Army Asymmetric Warfare Group established.

Deputy Commander, RDECOM, assigned as REF milestone decision authority establishing acquisition authority within the REF.

APRIL

REF Forward in Iraq hit by 127mm rocket fire.

OCTOBER

REF Table of Distribution and Allowances (TDA) becomes effective.



REF Forward Teams conducting CREW Training In Iraq

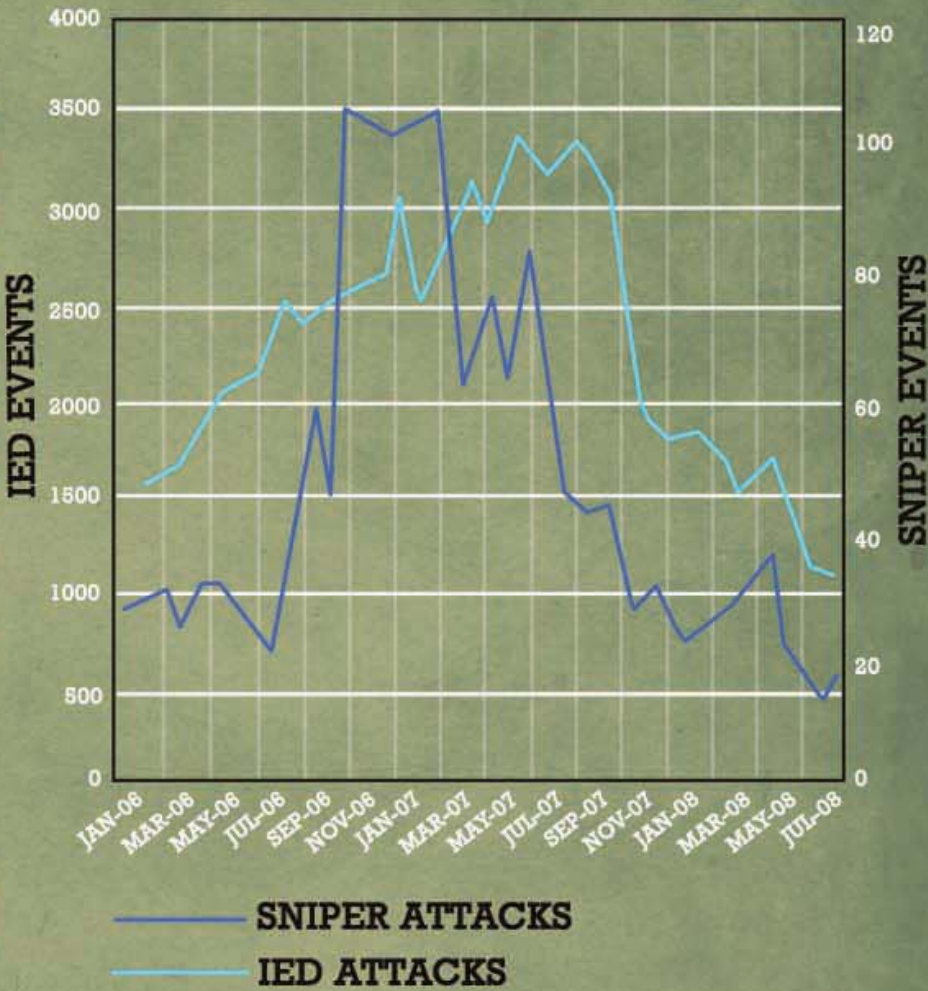


THE REF MISSION

CONTINUES TO EXPAND

2006

The threat of snipers faced US forces in both Iraq and Afghanistan from the earliest stages of the war. However, the sniper threat was overshadowed by the more prevalent and more serious IED threat and had not received the same attention. In 2006, the sniper threat increased dramatically. Enemy capabilities improved and the number and effectiveness of sniper attacks showed significant increases. The REF responded with a number of capabilities that rapidly diminished the threat. Still not all REF projects were based on direct combat operations. Logistics support and Traffic Control Points (TCP) required enormous resources and often exposed friendly forces to attack.



JANUARY

Joint Improvised Explosive Device Defeat Organization (JIEDDO) established.

MAY

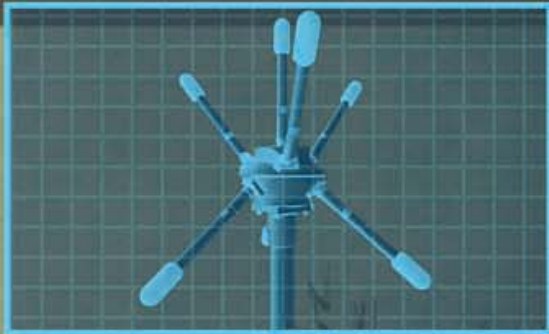
Army Asymmetric Warfare Office established.

OCTOBER

Power Surety Task Force/Energy Security Task Force established.

Eskimo Foam Insulation

Early Boomerang

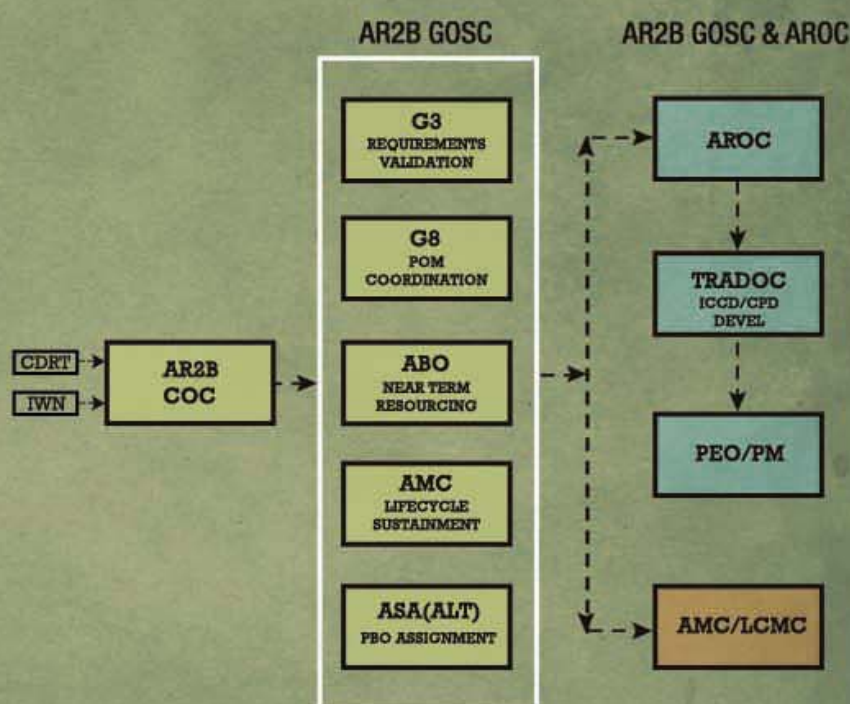


TRANSITIONING REF DEVELOPED CAPABILITIES TO MAINSTREAM ACQUISITION SYSTEM

2007

In order to be successful, the REF needs to remain small, agile, and focused on urgent warfighting needs. Transitioning successful initiatives to an appropriate Army proponent and counterpart Program Management Office is key. By the end of 2007, the REF had provided over 550 types of equipment totaling over 75,000 items to Warfighters conducting operations in Iraq, Afghanistan and other operational locations. The REF is a key participant in processes such as the Capabilities Development for Rapid Transition (CDRT) and the Immediate Warfighter Needs (IWN) that discontinue projects or recommend transition of project management to the greater Army.

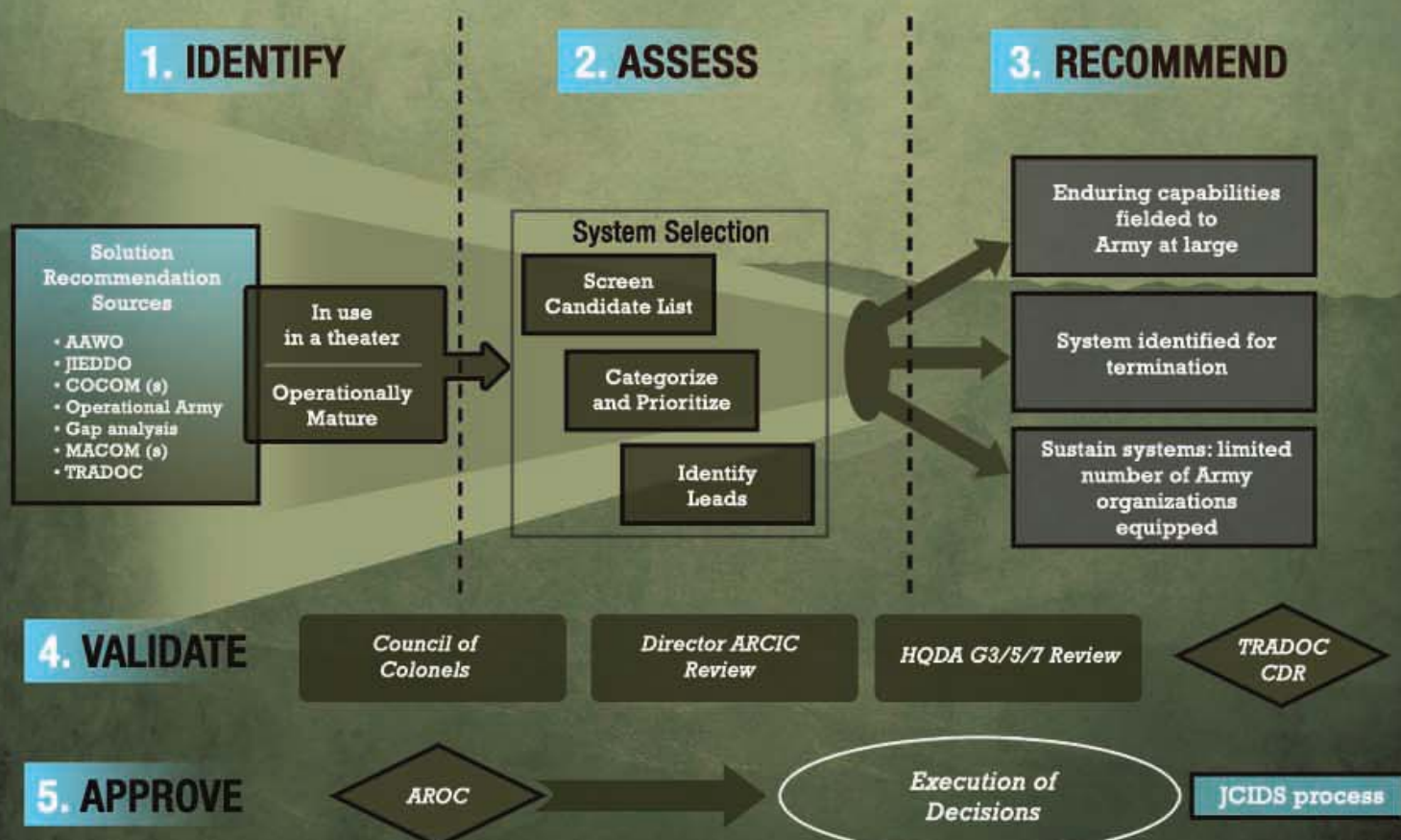
The REF Transition Process



MARCH

The Army Audit Agency published a review of its audit of REF acquisition procedures and found that the initiative was an important contributor to the Army's efforts to provide Warfighters with needed equipment in a timely manner.

CDRT PROCESS



THE REF REFINES ITS INTERNAL PROCESSES TO KEEP PACE WITH THE WARFIGHTER'S EVER INCREASING REQUIREMENTS

2008

As demand for the REF's unique capabilities mount due to expanded exposure and outreach to the operational forces, the REF makes improvements to its internal methods to ensure it meets emerging needs. Process homogeny and institutionalization ensure escalating requirements developing out of new tactics and strategies are effectively and ably addressed. Innovations in practice, such as proactive "push packages" of REF capabilities streamlined by an automated knowledge management system, support Warfighter requirements in a timely manner without an increase of resources.

LAPEER



FEBRUARY

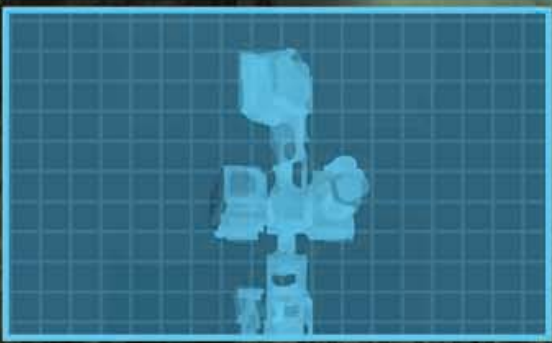
The REF transitions 16 Counter-Sniper programs to PEO Soldier.



Tourist



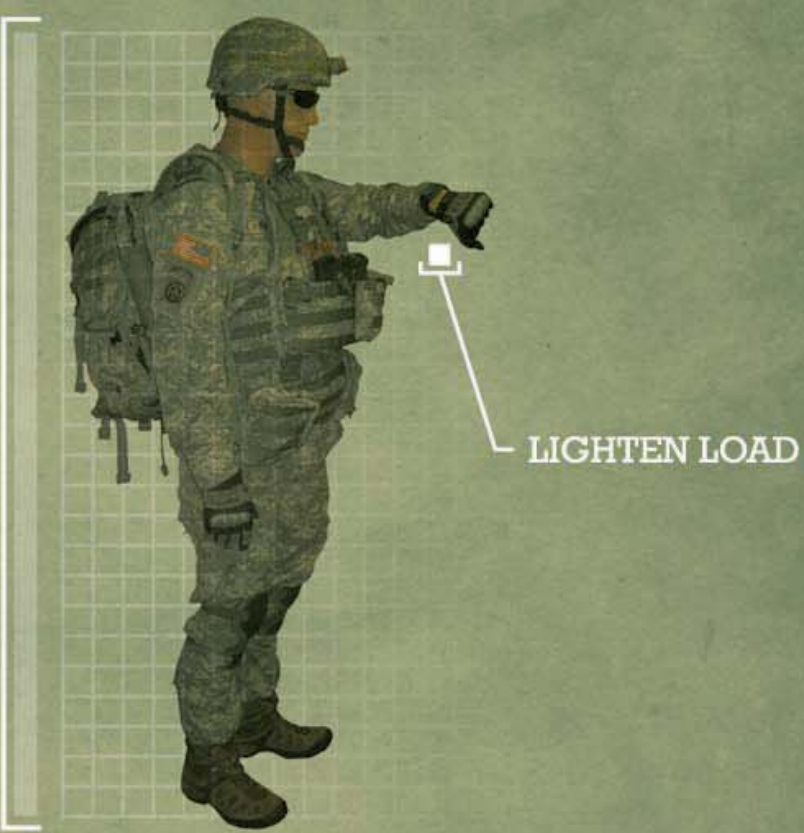
Cerberus System



THE REF REFOCUSSES ITS EFFORT ON OEF AS THE NATION'S PRIORITIES SHIFT TO THE WAR IN AFGHANISTAN

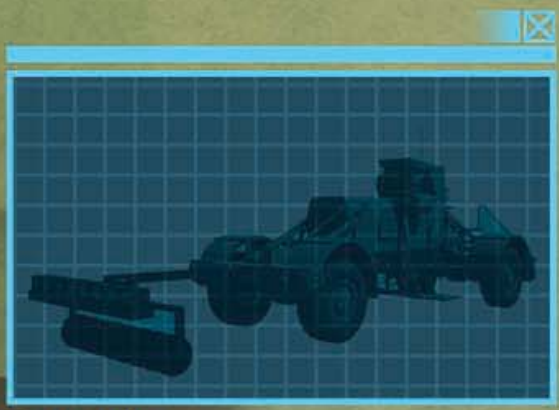
2009

With violence and instability steadily increasing in Afghanistan due to a resurgent Taliban supported by al Qaeda, the President approves a significant troop increase for Afghanistan. This increase includes a significant number of Soldiers. They require the capabilities of the REF to successfully engage a rejuvenated, determined and more refined insurgent enemy with improved weaponry in austere terrain and weather.



JUNE

REF Field Laboratories relocate to Afghanistan.



Duracrete

Force Field

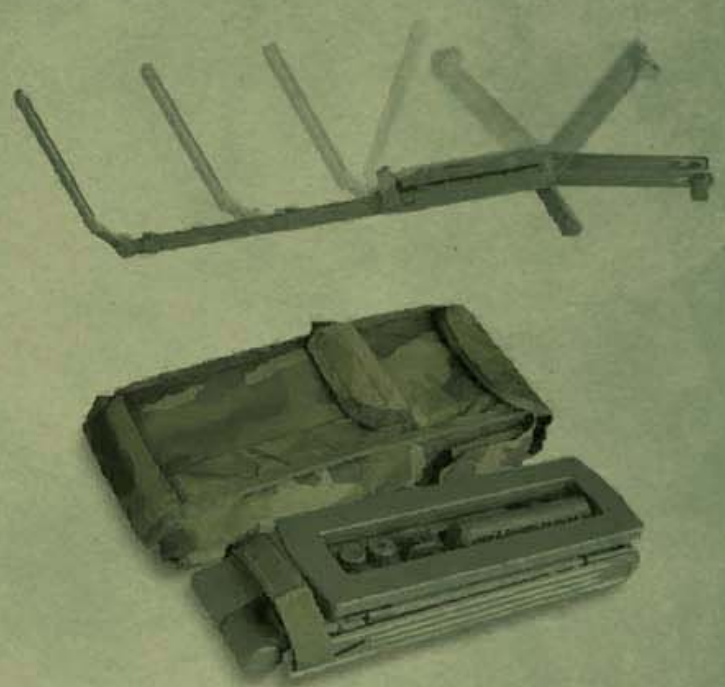


THE REF “CASTS A WIDE NET” TO LEVERAGE INDUSTRY, ACADEMIA & GOVERNMENT SOLUTIONS TO ADDRESS WARFIGHTER REQUIREMENTS

2010

Facing an enemy that exhibits added sophistication with each attack, the REF intensifies its cooperation efforts with industry, academia and other government agencies. These alliances assist the REF in identifying and understanding Warfighter requirements, as well as accelerating the development of new and innovative capabilities, tactics, techniques and procedures. Cooperation grows enormously, and now extends across international borders to include partners and stakeholders from across the globe.

GADGET



KITE

AUGUST

Operation Iraqi Freedom (OIF) Ends.

SEPTEMBER

Operation New Dawn (OND) begins.



Goldie

INTEGRATED PROBLEM SOLVING

2011

In January 2011, the REF Director established the REF Integrated Priority List (RIPL) to ensure that Soldiers' urgent operational requirements drive the content and order of all REF efforts. REF subject matter experts closely monitored Soldier requirement trends and global enemy threat developments to ensure the RIPL remained current and relevant. Since its inception, the RIPL has helped the REF find and develop game-changing technologies to fill immediate Soldier requirements. Some of the most notable technologies of 2011 focused on dismounted support operations, the measurement of blast effects, and the protection of combat outposts and forward operating bases.

With the decline in troop strength in Iraq and Afghanistan, the REF recognized the need for enhanced support to forces operating at the "tactical edge" of the battlefield in remote patrol bases and small combat outposts.

Subsequently, the REF focused on self-sustaining energy and water solutions, enemy surveillance capabilities, and indirect fire threat detection.

In 2011, the REF participated in the Army's Network Integration Evaluation to get Soldiers' pre-deployment operational assessments of emerging technologies.

The REF provided 11 technologies to the evaluation exercise; many of which have become Army success stories such as the Kraken base defense system, the Minotaur C-IED system, the SUG-V 320 dismounted robotic system, and the Puma unmanned aerial system.

Kraken

JANUARY

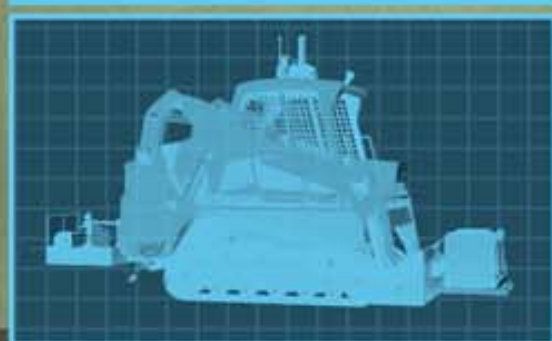
RIPL

JUNE

NIE 11.2

OCTOBER

NIE 12.1



Minotaur

As the Army launched Network Integrated Evaluation, the VCSA encouraged REF to participate in the evaluations with projects as much as possible without slowing the ref process to get equipment into the hands of soldiers. The REF placed an emphasis on this effort, and sent 11 projects to the NIE in 2011. Of those efforts, many successes for the Army came to fruition, including Kraken, Minotaur, SUG-V 320 and Puma.

